

North Carolina Department of Transportation NPDES Compliance Program



Environment - Planning and Policy Committee
May 5th, 2004



AGENDA

- 1) Stormwater – Why is it important?
- 2) NPDES Stormwater Regulations Phase I and Phase II – Protection of NC Surface Waters
- 3) NCDOT– NPDES Compliance Program

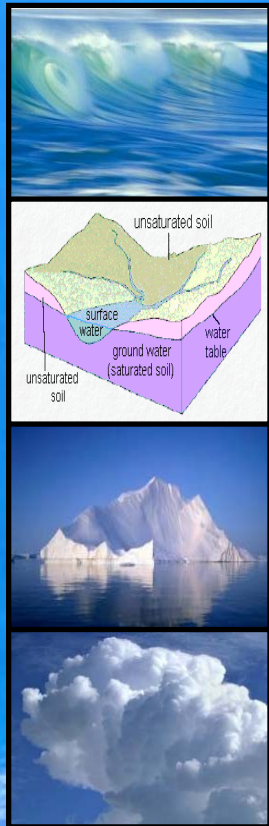


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Water Available for Use

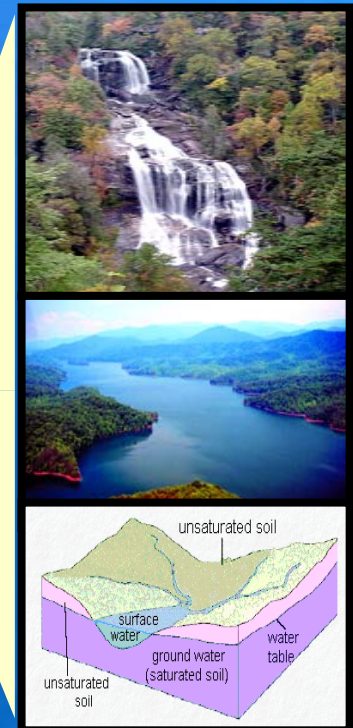
99.7%



Not Usable

Usable

0.3%



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Clean Water is Important for Quality of Life:



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Impacts of Development on Water Quality



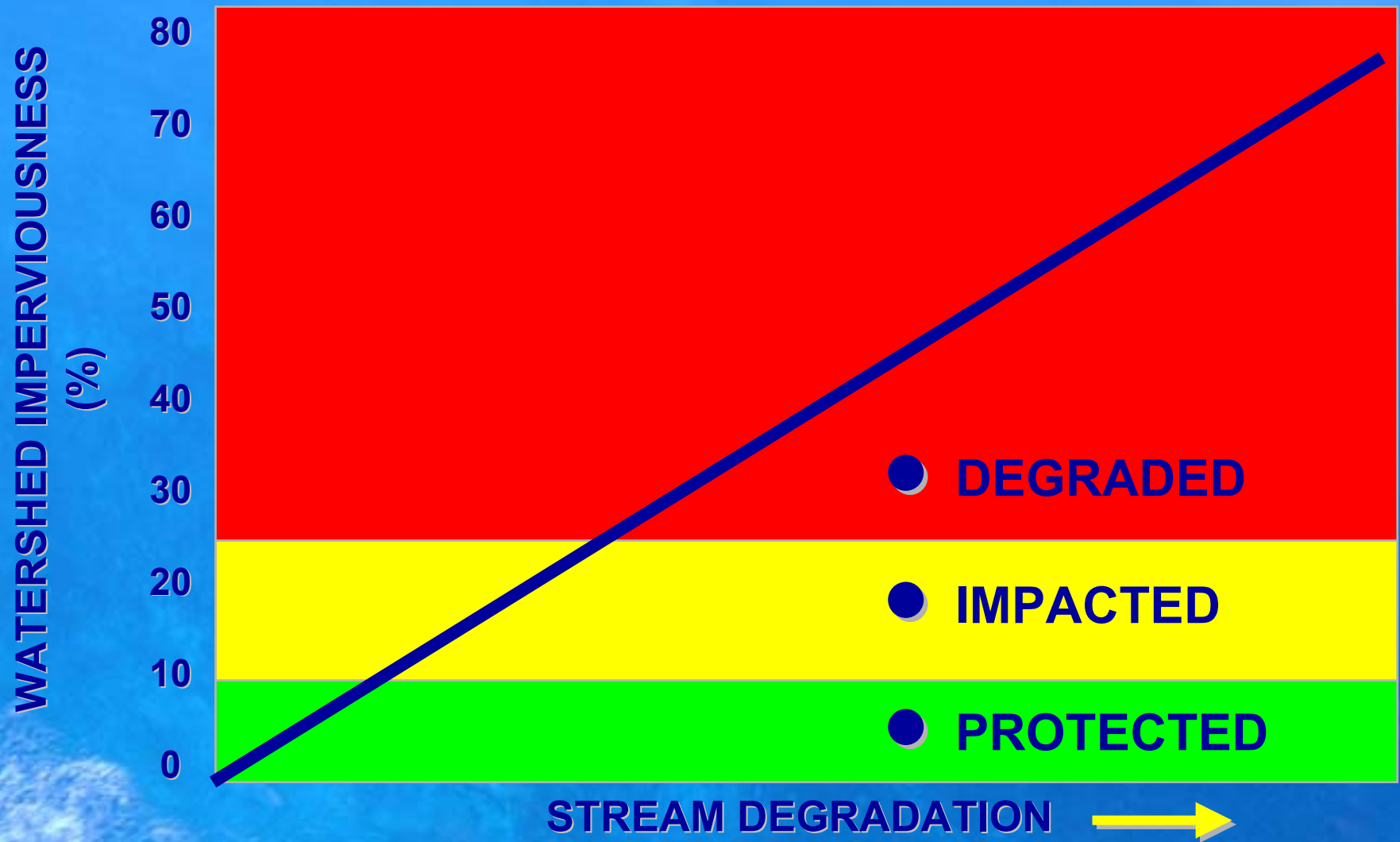
Increase in Impervious Areas



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Relationship Between % Imperviousness and Water Quality



ADAPTED FROM SCHUELER, ET. AL., 1992



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Development



**Stormwater
Runoff**



Pollutants



Water Quality



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Water Pollutants:

Nutrients

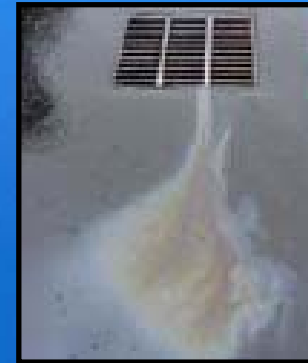
Pathogens

Sediment

Toxic Contaminants

Debris

Thermal Stress



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Water Quality Impairment

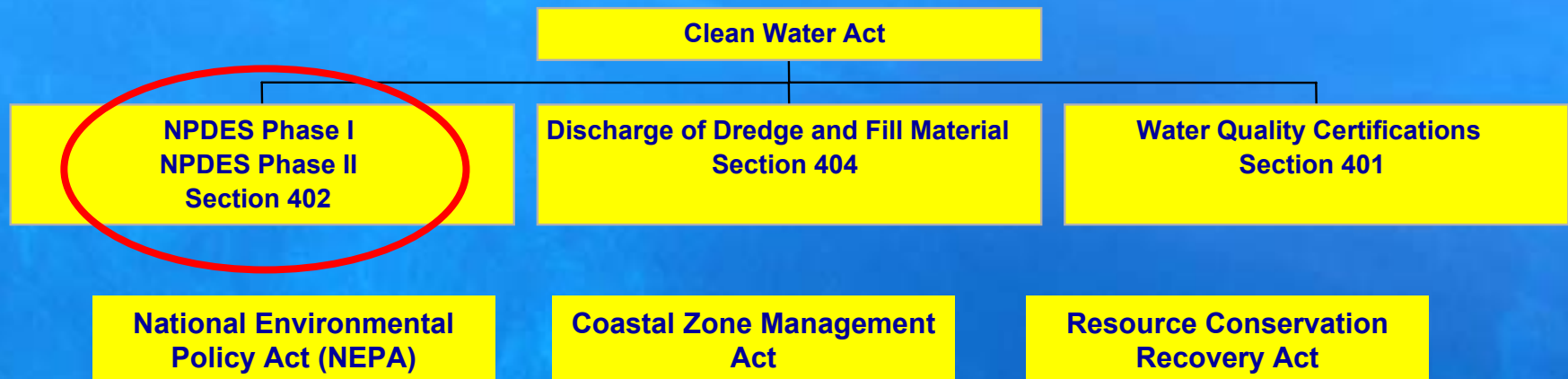


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Federal and State Regulations to protect Water Quality

Federal



State



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NPDES (National Pollutant Discharge Elimination System) Stormwater Permits



Allows permittees to discharge stormwater to waters of the State:

Five Year Terms		
Phase I Municipality >100,000 Charlotte Durham Fayetteville/ Cumberland County Greensboro Raleigh Winston - Salem	Phase I Highway NCDOT Roadways Construction Industrial Facilities Borrow Pits	Phase II Municipality >10,000 (Urbanized Areas) 123 Municipalities 33 Counties

1991

1998

2003



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NCDOT Permit Status:

Existing Phase I Statewide General Permit

NC Division of Water Quality (DWQ) issued
National Pollutant Discharge Elimination System
(NPDES) Permit No. NCS000250 to NCDOT
(June 8, 1998 through May 31, 2003)



Permit covers:
Borrow Pit Wastewater, Construction Activities
Ferry Terminals, Asphalt Plant
Maintenance Facilities, Material Storage Facilities
Roadway Systems



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NCDOT Permit Status:

Phase I Term Two

Renewal Application Submitted: November 26th, 2002

Permit Term: Five Year Term upon Renewal

Existing Regulated Systems

PLUS New Phase II

**Municipal Separate Storm Sewer System
(MS4) Requirements**



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Comparison of NCDOT Phase I Permit and Phase II Permit Requirements

Phase II Requirements:	NCDOT Phase I Requirements			
Six Minimum Measures	Roadway Drainage	Construction Activities	Industrial Facilities	Borrow Pit
1. Public Education and Outreach	X		X	
2. Public Participation and Involvement	X			
3. Illicit Discharge Detection and Elimination	X			
4. Construction Site Controls		X		X
5. Post Construction Controls				
6. Pollution Prevention – Good House Keeping	X	X	X	X
Additional NCDOT Phase I Requirements:				
Structural BMP Retrofits:	X			



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Post -Construction Requirements that NCDOT is Addressing in Phase I Term Two:

1. Control and treatment of first inch of runoff
2. Remove 85% of Total Suspended Solids
3. No new discharges or increase to SA Waters



**Linear
VS.
Grid**



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NCDOT NPDES Stormwater Compliance Program

- 1) Guiding Principles
- 2) Performance Structure
- 3) Term One Highlights
 - a) Industrial Facilities
 - b) BMP Retrofits
 - c) Education



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Guiding Principles

- (1) Comply with permit by managing, minimizing, and reducing stormwater pollutants from roadways and industrial areas.
- (2) Develop programs that can be effectively managed, implemented and integrated into NCDOT.
- (3) Develop solutions that improve program delivery that are proactive, form partnerships, have technical merit and are fiscally responsible.



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Transportation MISSION

The North Carolina Department of Transportation's (NCDOT) mission is to provide and support a safe and integrated transportation system that enhances the state..



Environmental Stewardship Policy

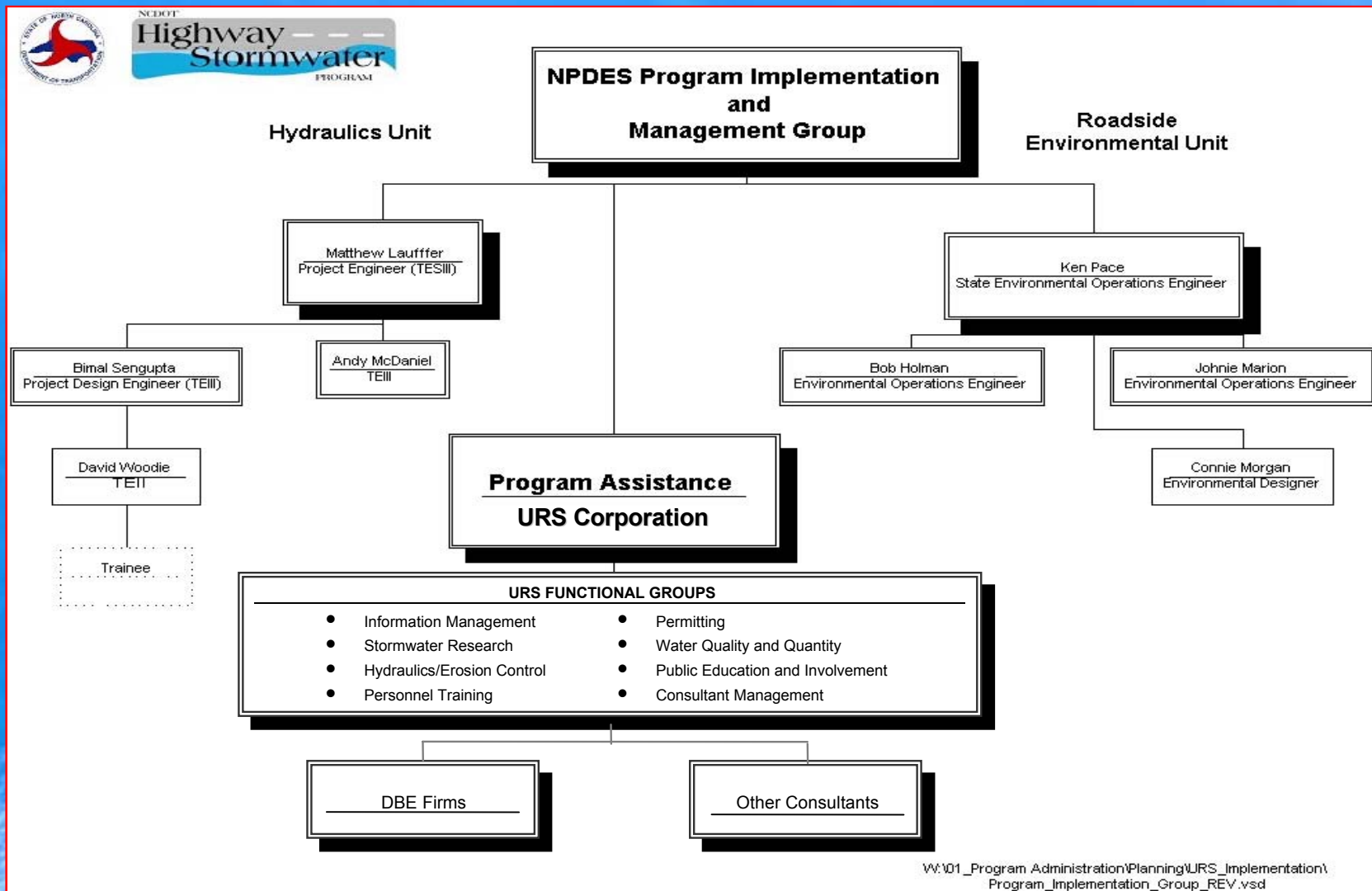
- ... conducting our business in an environmentally responsible manner.
- Demonstrating...commitment to the environment.
- ...provide mobility and quality of life that includes protection of ...natural resources, and cultural and social values...



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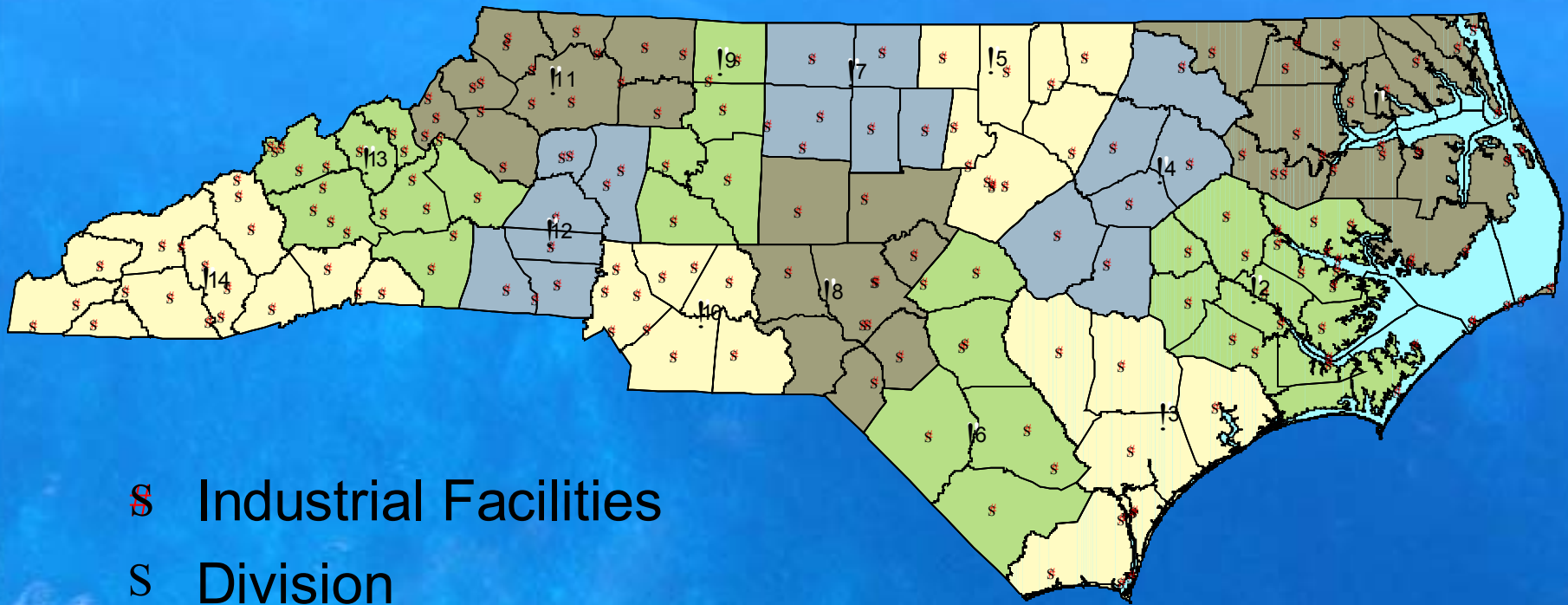
Performance Structure



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NCDOT Industrial Facilities - 184



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Stormwater Pollution Prevention Plans (SPPP)

- Responsibilities
- Education
- BMPs
 - Non-Structural
 - Structural
- Monitoring Requirements
- Reporting



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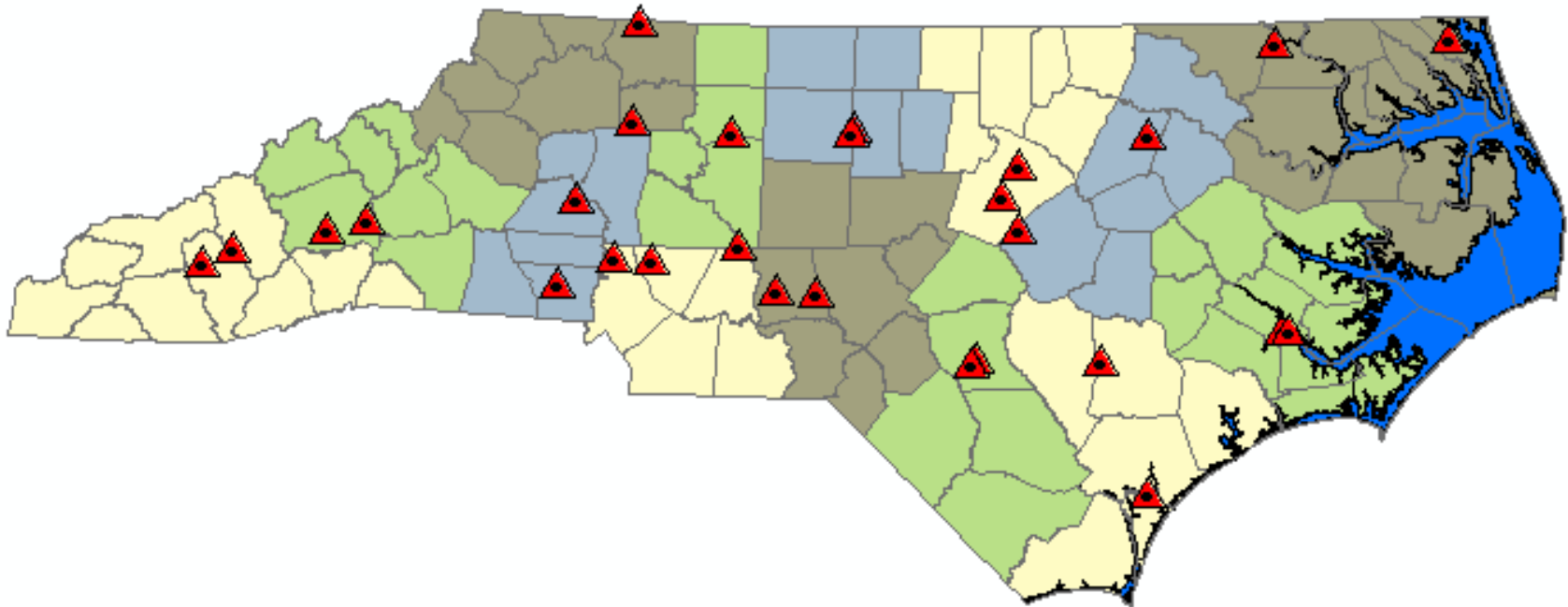
Director: Matthew Lauffer

Year: Year 5 (7/1/2002 to 6/30/2003) Form: Task Summary by Division

BMP Implementation Status Summary

Division	BMP Completion	Total BMPs	Total BMPs Completed	View Details	Division Engineer	POC
1	<div><div></div></div> 16%	1369	220	Detail	Don R. Conner	Gretchen A. Byrum
2	<div><div></div></div> 33%	1074	359	Detail	Neil Lassiter	Dwayne Alligood, PE
3	<div><div></div></div> 39%	769	297	Detail	Allen Pope	Jackson W. Provost
4	<div><div></div></div> 13%	645	83	Detail	Anthony W. Roper	Jimmy Eatmon
5	<div><div></div></div> 23%	653	153	Detail	Jon Nance	Ricky E. Greene
6	<div><div></div></div> 17%	482	82	Detail	Terry R. Gibson PE	Ken Murphy
7	<div><div></div></div> 58%	571	334	Detail	Mike Mills	Tommy Dyer
8	<div><div></div></div> 48%	880	421	Detail	Bill Rosser, PE	Richard W Hancock
9	<div><div></div></div> 45%	598	270	Detail	Pat Ivey, P.E.	Mike Patton, P.E.
10	<div><div></div></div> 38%	772	293	Detail	Benton G. Payne	Tim Boland
11	<div><div></div></div> 33%	1064	355	Detail	R. Carl McCann, PE	Michael A. Pettyjohn PE
12	<div><div></div></div> 46%	718	332	Detail	Mike Holder	Joe C. Lamb
13	<div><div></div></div> 33%	1222	403	Detail	Jay Swain	Ken Putnam, PE
14	<div><div></div></div> 12%	1110	132	Detail	Ron G. Watson	Reuben Moore
Equipment Depot	<div><div></div></div> 00%	101	0	Detail	Drew Harbinson	Eric Motzno
Sub Total	<div><div></div></div> 31%	12028	3734			
Ferry	<div><div></div></div> 25%	464	114	Detail		Joe Owens
Rail	<div><div></div></div> 00%	37	0	Detail		Allan Paul
Totals	<div><div></div></div> 31%	12529	3848			

BMP RETROTFITS 2001-2003



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Division 2: Dry Water Quality Swale: B-2531



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Bridge Drainage



Previous Outfall



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Division 2, Year 2: Dry Water Quality Swale, After Construction



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INTERNAL AND EXTERNAL – EDUCATION AND OUTREACH

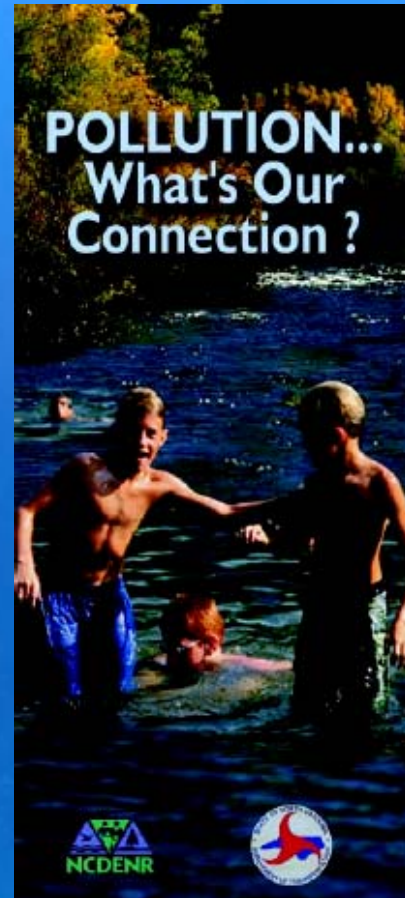
BEST MANAGEMENT PRACTICES FOR

CONSTRUCTION AND MAINTENANCE ACTIVITIES

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION



August 2003



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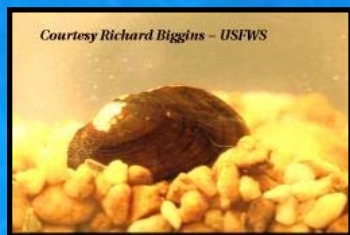




Closing Thoughts:

- Build Partnerships
- Be Proactive
- Think Context Sensitive Solutions
- Encourage Win-Win Programs

Design for Sustainability !!!



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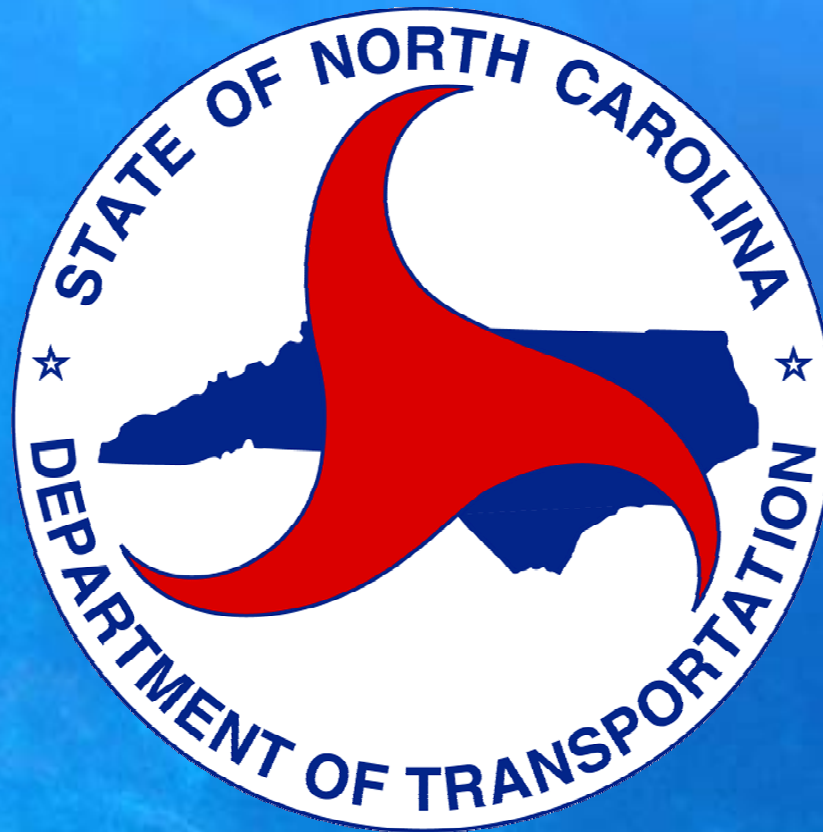


"The significant problems we face cannot be solved at the same level of thinking we were at when we created them." - Albert Einstein



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